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Notes on the Bionomics of *Xenomycetes morrisoni* Horn (Coleoptera: Endomychidae), Another Cantharidin-orienting Fungus Beetle

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Abstract.—A series of three male and three female *Xenomycetes morrisoni* Horn were recovered from cantharidin bait traps in Sequoia and King's Canyon national parks during the summer of 1987. This is the first record for *Xenomycetes* being attracted to cantharidin; it joins three other endomychid genera (*Aphorista, Lycoperdina* and *Danae*) in this association.

The role of cantharidin in the defensive chemistry of blister beetles (Coleoptera: Meloidae) has been understood for nearly 100 yr (Cuenot, 1890; Mayer and Johansen, 1977). Kurosa and Watanabe (1958) proved that the vesicant, and probable allomone, of some oedemerid beetles is also cantharidin. However, for a growing number of insect species cantharidin appears to play a significant, but unknown role. Many insects have been observed orienting to cantharidin (Young, 1984a, 1984b), and this assemblage presently includes four species of Endomychidae. Three of these species [*Aphorista vittata* (Fabricius), *Lycoperdina ferruginea* LeConte and *Danae testacea* (Ziegler)] are indigenous to eastern North America. The fourth species, *A. laeta* (LeConte), is endemic to western North America and has been taken at cantharidin-baited traps in Idaho and in the Sierra-Nevada Mountains of California.

During the summer of 1987, cantharidin-baited traps were run at several localities within Sequoia and King's Canyon national parks. The trap follows the "jar-trap" design I described elsewhere (Young, 1984b:195). Four samples contained specimens of *Xenomycetes morrisoni* Horn. As with other cantharidin-orienting endomychids, both males and females were found in the traps. Five specimens, including 3 males and 2 females, were collected in the Giant Forest Area near Round Meadow, during the week of 4–11 July. A single female was also recovered from a trap at Redwood Canyon Overlook, King's Canyon N.P., 6800′, 31 May–5 June.

Xenomycetes was described by Horn (1880) from three specimens. Two of the syntypes were described as having been collected by Morrison in "the high Sierras of western Nevada"; the third was taken by Crotch. Leng (1920) listed *morrisoni* from Nevada only; Strohecker (1953) added California and Washington to the distributional range.

Virtually nothing has been published about the natural history of *X. morrisoni.* Johnson (1986) described the larva of *X. laversi* Hatch, the only other species in the genus. According to Johnson, *laversi* appears to be restricted to *Paxillus*

atrotomentosus (Batsch ex Fr.) Fries. This fungus is widely distributed in the coniferous forests of North America, with sporocarps generally appearing from late July through October (Lincoff, 1981).

Having compared the Sequoia specimens of *morrisoni* with Hatch's original description of *laversi* and Horn's description of *morrisoni,* I question the validity of *laversi.* Johnson (pers. comm.) shares my concern, although neither of us has examined the types of either species. Thus, comments relating to *laversi* may well apply to *morrisoni. Xenomycetes* is the only genus included in the Xenomycetinae; the other cantharidin-orienting species of Endomychidae are assigned to the Eumorphinae (*Lycoperdina* and *Aphorista*) and the Stenotarsinae (*Danae*).

The significance of cantharidin attractancy in *Xenomycetes,* and other endomychids for that matter, is unknown. I have commonly seen specimens of *L. ferruginea* mating and apparently feeding upon cantharidin-baited filter papers in the field; I have also observed this behavior for *A. vittata.* Whether cantharidin, or a related compound, is involved in mating or feeding behavior has, however, not been tested.

The specimens of *morrisoni* are deposited in the research collection at the University of Wisconsin, my collection, and the collection at Sequoia and King's Canyon national parks.

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